


EXHIBIT C:

MULTISPECIES COMPARISON OF MO25 POLYPEPTIDE



HomoloGene
 "Discover Homologs"

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search for

[Limits](#) [Preview/Index](#) [History](#) [Clipboard](#) [Details](#)

Display Show Send to

All: 1 Fungi: 0 Mammals: 0

☐ 1: HomoloGene:69212. Gene conserved in Eukaryota

[Download](#) , [Links](#)

Pairwise Alignment Scores

Species	Gene	Symbol	Identity (%)		Substitution Rates ¹			
			Protein	DNA	d	d _N /d _S	d _{NR} /d _{NC}	
Homo sapiens	CAB39							
vs. Pan troglodytes	CAB39		100.0	99.9	0.001	0	0	Blast
vs. Canis lupus familiaris	CAB39		99.4	94.8	0.054	0	0	Blast
vs. Bos taurus	CAB39		100.0	94.0	0.062	0	0	Blast
vs. Mus musculus	Cab39		98.8	92.4	0.080	0	0	Blast
vs. Rattus norvegicus	Cab39		99.4	92.6	0.078	0	0	Blast
vs. Danio rerio	cab39		93.0	79.6	0.239	0	0	Blast
vs. Drosophila melanogaster	Mo25		71.9	63.8	0.494	0	0	Blast
vs. Anopheles gambiae	Agap_AGAP000812		72.6	64.1	0.489	0	0	Blast
vs. Anopheles gambiae	Agap_AGAP011060		73.3	64.8	0.476	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1		65.3	61.7	0.537	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2		61.2	60.5	0.561	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25		51.7	55.7	0.669	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270		44.7	52.4	0.766	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540		43.5	52.5	0.753	0	0	Blast
vs. Oryza sativa	Osa07g0585100		47.0	54.1	0.711	0	0	Blast
Pan troglodytes	CAB39							
vs. Homo sapiens	CAB39		100.0	99.9	0.001	0	0	Blast
vs. Canis lupus familiaris	CAB39		99.4	94.8	0.054	0	0	Blast
vs. Bos taurus	CAB39		100.0	93.9	0.063	0	0	Blast
vs. Mus musculus	Cab39		98.8	92.3	0.081	0	0	Blast
vs. Rattus norvegicus	Cab39		99.4	92.5	0.079	0	0	Blast
vs. Danio rerio	cab39		93.0	79.6	0.239	0	0	Blast
vs. Drosophila melanogaster	Mo25		71.9	63.8	0.494	0	0	Blast
vs. Anopheles gambiae	Agap_AGAP000812		72.6	64.1	0.489	0	0	Blast
vs. Anopheles gambiae	Agap_AGAP011060		73.3	64.8	0.476	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1		65.3	61.7	0.537	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2		61.2	60.5	0.561	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25		51.7	55.6	0.672	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270		44.7	52.4	0.766	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540		43.5	52.5	0.753	0	0	Blast
vs. Oryza sativa	Osa07g0585100		47.0	54.1	0.711	0	0	Blast
Canis lupus familiaris	CAB39							
vs. Homo sapiens	CAB39		99.4	94.8	0.054	0	0	Blast
vs. Pan troglodytes	CAB39		99.4	94.8	0.054	0	0	Blast
vs. Bos taurus	CAB39		99.4	93.5	0.067	0	0	Blast
vs. Mus musculus	Cab39		98.8	91.2	0.094	0	0	Blast

vs. <i>Rattus norvegicus</i>	Cab39	98.4	91.4	0.091	0	0	Blast
vs. <i>Danio rerio</i>	cab39	93.0	79.6	0.239	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	72.5	64.5	0.480	0	0	Blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP000812	72.9	64.5	0.482	0	0	Blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP011060	73.6	64.9	0.474	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	65.3	61.1	0.549	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	60.9	60.3	0.565	0	0	Blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	51.7	54.5	0.700	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	44.7	52.1	0.764	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	43.5	52.1	0.764	0	0	Blast
vs. <i>Oryza sativa</i>	Os07g0585100	47.0	54.1	0.711	0	0	Blast
Bos taurus							
vs. <i>Homo sapiens</i>	CAB39	100.0	94.0	0.062	0	0	Blast
vs. <i>Pan troglodytes</i>	CAB39	100.0	93.9	0.063	0	0	Blast
vs. <i>Canis lupus familiaris</i>	CAB39	99.4	93.5	0.067	0	0	Blast
vs. <i>Mus musculus</i>	Cab39	98.8	91.6	0.089	0	0	Blast
vs. <i>Rattus norvegicus</i>	Cab39	99.4	92.0	0.085	0	0	Blast
vs. <i>Danio rerio</i>	cab39	93.0	79.4	0.241	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	71.9	65.7	0.458	0	0	Blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP000812	72.6	65.4	0.465	0	0	Blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP011060	73.3	66.2	0.450	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	65.3	61.7	0.537	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	61.2	60.6	0.559	0	0	Blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	51.7	53.8	0.716	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	44.7	52.1	0.764	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	43.5	52.5	0.753	0	0	Blast
vs. <i>Oryza sativa</i>	Os07g0585100	47.0	54.5	0.701	0	0	Blast
Mus musculus							
vs. <i>Homo sapiens</i>	CAB39	98.8	92.4	0.080	0	0	Blast
vs. <i>Pan troglodytes</i>	CAB39	98.8	92.3	0.081	0	0	Blast
vs. <i>Canis lupus familiaris</i>	CAB39	98.8	91.2	0.094	0	0	Blast
vs. <i>Bos taurus</i>	CAB39	98.8	91.6	0.089	0	0	Blast
vs. <i>Rattus norvegicus</i>	Cab39	99.4	96.4	0.037	0	0	Blast
vs. <i>Danio rerio</i>	cab39	92.4	80.4	0.227	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	72.2	66.5	0.445	0	0	Blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP000812	72.9	66.4	0.446	0	0	Blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP011060	72.6	66.5	0.443	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	64.3	61.4	0.543	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	61.2	59.6	0.580	0	0	Blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	51.7	54.0	0.713	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	45.0	53.1	0.737	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	43.5	51.7	0.775	0	0	Blast
vs. <i>Oryza sativa</i>	Os07g0585100	47.0	53.9	0.716	0	0	Blast
Rattus norvegicus							
vs. <i>Homo sapiens</i>	CAB39	99.4	92.6	0.078	0	0	Blast
vs. <i>Pan troglodytes</i>	CAB39	99.4	92.5	0.079	0	0	Blast
vs. <i>Canis lupus familiaris</i>	CAB39	99.4	91.4	0.091	0	0	Blast
vs. <i>Bos taurus</i>	CAB39	99.4	92.0	0.085	0	0	Blast
vs. <i>Mus musculus</i>	Cab39	99.4	96.4	0.037	0	0	Blast
vs. <i>Danio rerio</i>	cab39	93.0	80.0	0.233	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	72.2	65.7	0.458	0	0	Blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP000812	72.9	66.0	0.454	0	0	Blast

vs. <i>Anopheles gambiae</i>	Agap_AGAP011060	72.6	65.9	0.455	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	64.3	61.2	0.547	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	61.2	59.8	0.576	0	0	blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	51.7	53.7	0.720	0	0	blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	44.7	52.2	0.761	0	0	blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	43.5	51.5	0.781	0	0	blast
vs. <i>Oryza sativa</i>	Os07g0585100	47.0	54.2	0.708	0	0	blast
Danio rerio	cab39						
vs. <i>Homo sapiens</i>	CAB39	93.0	79.6	0.239	0	0	blast
vs. <i>Pan troglodytes</i>	CAB39	93.0	79.6	0.239	0	0	blast
vs. <i>Canis lupus familiaris</i>	CAB39	93.0	79.6	0.239	0	0	blast
vs. <i>Bos taurus</i>	CAB39	93.0	79.4	0.241	0	0	blast
vs. <i>Mus musculus</i>	Cab39	92.4	80.4	0.227	0	0	blast
vs. <i>Rattus norvegicus</i>	Cab39	93.0	80.0	0.233	0	0	blast
vs. <i>Drosophila melanogaster</i>	Mo25	69.5	68.8	0.404	0	0	blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP000812	70.9	69.4	0.393	0	0	blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP011060	70.6	67.8	0.421	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	63.8	62.1	0.529	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	80.9	61.1	0.548	0	0	blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	51.7	52.5	0.753	0	0	blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	45.3	53.2	0.734	0	0	blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	43.8	52.1	0.764	0	0	blast
vs. <i>Oryza sativa</i>	Os07g0585100	47.0	53.7	0.722	0	0	blast
Drosophila melanogaster	Mo25						
vs. <i>Homo sapiens</i>	CAB39	71.9	63.8	0.494	0	0	blast
vs. <i>Pan troglodytes</i>	CAB39	71.9	63.8	0.494	0	0	blast
vs. <i>Canis lupus familiaris</i>	CAB39	72.5	64.5	0.480	0	0	blast
vs. <i>Bos taurus</i>	CAB39	71.9	65.7	0.458	0	0	blast
vs. <i>Mus musculus</i>	Cab39	72.2	66.5	0.445	0	0	blast
vs. <i>Rattus norvegicus</i>	Cab39	72.2	65.7	0.458	0	0	blast
vs. <i>Danio rerio</i>	cab39	69.5	68.8	0.404	0	0	blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP000812	88.7	82.2	0.203	0	0	blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP011060	86.4	82.5	0.199	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	65.8	64.3	0.485	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	63.5	59.8	0.576	0	0	blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	52.1	51.1	0.791	0	0	blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	42.4	51.3	0.785	0	0	blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	42.1	50.2	0.818	0	0	blast
vs. <i>Oryza sativa</i>	Os07g0585100	46.2	52.3	0.758	0	0	blast
Anopheles gambiae	Agap_AGAP000812						
vs. <i>Homo sapiens</i>	CAB39	72.6	64.1	0.489	0	0	blast
vs. <i>Pan troglodytes</i>	CAB39	72.6	64.1	0.489	0	0	blast
vs. <i>Canis lupus familiaris</i>	CAB39	72.9	64.5	0.482	0	0	blast
vs. <i>Bos taurus</i>	CAB39	72.6	65.4	0.465	0	0	blast
vs. <i>Mus musculus</i>	Cab39	72.9	66.4	0.446	0	0	blast
vs. <i>Rattus norvegicus</i>	Cab39	72.9	66.0	0.454	0	0	blast
vs. <i>Danio rerio</i>	cab39	70.9	69.4	0.393	0	0	blast
vs. <i>Drosophila melanogaster</i>	Mo25	88.7	82.2	0.203	0	0	blast
vs. <i>Anopheles gambiae</i>	Agap_AGAP011060	93.7	90.7	0.100	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	66.2	64.9	0.474	0	0	blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	62.0	61.8	0.534	0	0	blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	50.9	50.1	0.821	0	0	blast

vs. <i>Arabidopsis thaliana</i>	AT4G17270	43.1	51.1	0.793	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	43.3	49.8	0.830	0	0	Blast
vs. <i>Oryza sativa</i>	Os07g0585100	46.0	51.6	0.776	0	0	Blast
Anopheles gambiae							
AgarP_AGAP011060							
vs. <i>Homo sapiens</i>	CAB39	73.3	64.8	0.476	0	0	Blast
vs. <i>Pan troglodytes</i>	CAB39	73.3	64.8	0.476	0	0	Blast
vs. <i>Canis lupus familiaris</i>	CAB39	73.6	64.9	0.474	0	0	Blast
vs. <i>Bos taurus</i>	CAB39	73.3	66.2	0.450	0	0	Blast
vs. <i>Mus musculus</i>	Cab39	72.6	66.6	0.443	0	0	Blast
vs. <i>Rattus norvegicus</i>	Cab39	72.6	65.9	0.455	0	0	Blast
vs. <i>Danio rerio</i>	cab39	70.6	67.8	0.421	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	86.4	82.5	0.199	0	0	Blast
vs. <i>Anopheles gambiae</i>	AgarP_AGAP000812	93.7	90.7	0.100	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	63.5	65.4	0.464	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	60.5	60.5	0.561	0	0	Blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	60.6	50.0	0.824	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	43.1	50.6	0.807	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	42.9	48.5	0.869	0	0	Blast
vs. <i>Oryza sativa</i>	Os07g0585100	44.8	50.8	0.800	0	0	Blast
Caenorhabditis elegans							
mop-25.1							
vs. <i>Homo sapiens</i>	CAB39	65.3	61.7	0.537	0	0	Blast
vs. <i>Pan troglodytes</i>	CAB39	65.3	61.7	0.537	0	0	Blast
vs. <i>Canis lupus familiaris</i>	CAB39	65.3	61.1	0.549	0	0	Blast
vs. <i>Bos taurus</i>	CAB39	65.3	61.7	0.537	0	0	Blast
vs. <i>Mus musculus</i>	Cab39	64.3	61.4	0.543	0	0	Blast
vs. <i>Rattus norvegicus</i>	Cab39	64.3	61.2	0.547	0	0	Blast
vs. <i>Danio rerio</i>	cab39	63.8	62.1	0.529	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	66.8	64.3	0.485	0	0	Blast
vs. <i>Anopheles gambiae</i>	AgarP_AGAP000812	66.2	64.9	0.474	0	0	Blast
vs. <i>Anopheles gambiae</i>	AgarP_AGAP011060	63.5	65.4	0.464	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	72.1	66.2	0.450	0	0	Blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	51.7	53.3	0.731	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	45.5	50.8	0.800	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	46.5	50.1	0.822	0	0	Blast
vs. <i>Oryza sativa</i>	Os07g0585100	48.5	52.7	0.747	0	0	Blast
Caenorhabditis elegans							
mop-25.2							
vs. <i>Homo sapiens</i>	CAB39	61.2	60.5	0.561	0	0	Blast
vs. <i>Pan troglodytes</i>	CAB39	61.2	60.5	0.561	0	0	Blast
vs. <i>Canis lupus familiaris</i>	CAB39	60.9	60.3	0.565	0	0	Blast
vs. <i>Bos taurus</i>	CAB39	61.2	60.6	0.559	0	0	Blast
vs. <i>Mus musculus</i>	Cab39	61.2	59.6	0.580	0	0	Blast
vs. <i>Rattus norvegicus</i>	Cab39	61.2	59.8	0.576	0	0	Blast
vs. <i>Danio rerio</i>	cab39	60.9	61.1	0.548	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	63.5	59.8	0.576	0	0	Blast
vs. <i>Anopheles gambiae</i>	AgarP_AGAP000812	62.0	61.6	0.534	0	0	Blast
vs. <i>Anopheles gambiae</i>	AgarP_AGAP011060	60.5	60.5	0.561	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	72.1	66.2	0.450	0	0	Blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	48.8	52.0	0.765	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	42.9	49.5	0.839	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	42.2	49.9	0.827	0	0	Blast
vs. <i>Oryza sativa</i>	Os07g0585100	45.5	51.2	0.789	0	0	Blast
Schizosaccharomyces pombe							
pmo25							

vs. Homo sapiens	CAB39	51.7	55.7	0.669	0	0	Blast
vs. Pan troglodytes	CAB39	51.7	55.6	0.672	0	0	Blast
vs. Canis lupus familiaris	CAB39	51.7	54.5	0.700	0	0	Blast
vs. Bos taurus	CAB39	51.7	53.8	0.718	0	0	Blast
vs. Mus musculus	Cab39	51.7	54.0	0.713	0	0	Blast
vs. Rattus norvegicus	Cab39	51.7	53.7	0.720	0	0	Blast
vs. Danio rerio	cab39	51.7	52.5	0.753	0	0	Blast
vs. Drosophila melanogaster	Mo25	52.1	51.1	0.791	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	50.9	50.1	0.821	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	50.6	50.0	0.824	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	51.7	53.3	0.731	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	48.8	52.0	0.765	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	39.9	51.0	0.794	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	40.4	50.3	0.816	0	0	Blast
vs. Oryza sativa	Os07g0585100	43.0	51.4	0.782	0	0	Blast
Arabidopsis thaliana							
	AT4G17270						
vs. Homo sapiens	CAB39	44.7	52.4	0.756	0	0	Blast
vs. Pan troglodytes	CAB39	44.7	52.4	0.756	0	0	Blast
vs. Canis lupus familiaris	CAB39	44.7	52.1	0.764	0	0	Blast
vs. Bos taurus	CAB39	44.7	52.1	0.764	0	0	Blast
vs. Mus musculus	Cab39	45.0	53.1	0.737	0	0	Blast
vs. Rattus norvegicus	Cab39	44.7	52.2	0.761	0	0	Blast
vs. Danio rerio	cab39	45.3	53.2	0.734	0	0	Blast
vs. Drosophila melanogaster	Mo25	42.4	51.3	0.785	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	43.1	51.1	0.793	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	43.1	50.6	0.807	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	45.5	50.8	0.800	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	42.9	49.5	0.839	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	39.9	51.0	0.794	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	87.2	85.4	0.162	0	0	Blast
vs. Oryza sativa	Os07g0585100	70.8	70.5	0.374	0	0	Blast
Arabidopsis thaliana							
	AT5G47540						
vs. Homo sapiens	CAB39	43.5	52.5	0.753	0	0	Blast
vs. Pan troglodytes	CAB39	43.5	52.5	0.753	0	0	Blast
vs. Canis lupus familiaris	CAB39	43.5	52.1	0.764	0	0	Blast
vs. Bos taurus	CAB39	43.5	52.5	0.753	0	0	Blast
vs. Mus musculus	Cab39	43.5	51.7	0.775	0	0	Blast
vs. Rattus norvegicus	Cab39	43.5	51.5	0.781	0	0	Blast
vs. Danio rerio	cab39	43.8	52.1	0.764	0	0	Blast
vs. Drosophila melanogaster	Mo25	42.1	50.2	0.818	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	43.3	49.8	0.830	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	42.9	48.5	0.869	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	46.5	50.1	0.822	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	42.2	49.9	0.827	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	40.4	50.3	0.816	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	87.2	85.4	0.162	0	0	Blast
vs. Oryza sativa	Os07g0585100	76.5	72.1	0.349	0	0	Blast
Oryza sativa							
	Os07g0585100						
vs. Homo sapiens	CAB39	47.0	54.1	0.711	0	0	Blast
vs. Pan troglodytes	CAB39	47.0	54.1	0.711	0	0	Blast
vs. Canis lupus familiaris	CAB39	47.0	54.1	0.711	0	0	Blast
vs. Bos taurus	CAB39	47.0	54.5	0.701	0	0	Blast

vs. <i>Mus musculus</i>	Cab39	47.0	53.9	0.716	0	0	Blast
vs. <i>Rattus norvegicus</i>	Cab39	47.0	54.2	0.708	0	0	Blast
vs. <i>Danio rerio</i>	cab39	47.0	53.7	0.722	0	0	Blast
vs. <i>Drosophila melanogaster</i>	Mo25	46.2	52.3	0.758	0	0	Blast
vs. <i>Anopheles gambiae</i>	AgaP_AGAP000812	46.0	51.6	0.776	0	0	Blast
vs. <i>Anopheles gambiae</i>	AgaP_AGAP011060	44.8	50.8	0.800	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.1	48.5	52.7	0.747	0	0	Blast
vs. <i>Caenorhabditis elegans</i>	mop-25.2	45.5	51.2	0.789	0	0	Blast
vs. <i>Schizosaccharomyces pombe</i>	pmo25	43.0	51.4	0.782	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT4G17270	70.8	70.5	0.374	0	0	Blast
vs. <i>Arabidopsis thaliana</i>	AT5G47540	76.5	72.1	0.349	0	0	Blast

¹ We present three rates for nucleotide substitutions per site, as defined below:

- d : the number of nucleotide substitutions per site, corrected for multiple substitutions using the method of Jukes and Cantor (1969).
- d_N/d_S : the ratio of the rate of nonsynonymous substitutions (d_N) to the rate of synonymous substitutions (d_S), calculated using the method of Nei and Gojobori (1986). A high value of this metric indicates adaptive selection, whereas a low value indicates purifying selection.
- d_{NR}/d_{NC} : the ratio of radical nonsynonymous substitutions (d_{NR}) to conservative nonsynonymous substitutions (d_{NC}), calculated using the method of Hughes et al. (1990). This metric is analogous to d_N/d_S , but it has the advantage of being useful for studying the evolution of sequences that diverged in the distant past.

References

- Jukes TH, Cantor CR. Evolution of protein molecules. In: HN Munro, editor. Mammalian protein metabolism III. New York: Academic Press; 1969. p.21-132.
- Nei M, Gojobori T. Simple methods for estimating the numbers of synonymous and nonsynonymous nucleotide substitutions. Mol Biol Evol. 1986;3(6):418-26.
- Hughes AL, Ota T, Nei M. Positive Darwinian selection promotes charge profile diversity in the antigen-binding cleft of class I MHC molecules. Mol Biol Evol. 1990;7(6):515-24.

Display Show Send to

[Write to the Help Desk](#)

[NCBI | NLM | NIH](#)

[Department of Health & Human Services](#)

[Privacy Statement](#) | [Freedom of Information Act](#) | [Disclaimer](#)